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*Family Income and the College Completion Gap*

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A college education has become an important gateway to the middle class, defined as the middle four deciles of income. In previous generations, a high school diploma alone was often sufficient to reach the middle class; in 1970 almost 60% of high school graduates did so. By 2007, however, this percentage fell to 45% of high school graduates, thus making college completion an economically important benchmark for young Americans (Carnevale, Smith & Strohl, 2010).

Obtaining a college education is particularly challenging for low-income students: poor students are less likely to attend college in the first place, and those who do attend are less likely to graduate. Although for many decades, policymakers focused on college *enrollment*, they are increasingly setting their sites on college completion. For good reason: the gap between poor and rich students' college graduation rates is larger than the gap between their college enrollment rates (Dynarski, 2015).

What do we know about college completion for students from low socioeconomic status (SES) backgrounds? What are the most likely causes of these statistics? Are there solutions that seem to narrow the gap and propel students forward?

### The Facts

The National Center for Education Statistics (NCES) recently reported their findings from the Education Longitudinal Study, which followed a nationally representative sample of 15,000 students who were in 10<sup>th</sup> grade in 2002 (Kena et al., 2015). The researchers were interested in students' life outcomes, including college access, entry, and graduation. Important findings from the report include:

1. **Lower graduation rates among students from low-SES backgrounds.** College graduation rates amongst students from the lowest quartile in the sample, low-SES backgrounds, are 14% compared to 60% of students from high-SES backgrounds, the top quartile of the sample.
2. **College graduation is lower even among low-income students who expect to graduate from college.** When students were asked as high school sophomores about their expected educational attainment, 58% of students from low-SES backgrounds expected to graduate from college (in comparison to 87% of students from high-SES backgrounds). However, when researchers later revisited these same students, only a quarter of low-SES students actually did graduate from college, in comparison to a much higher percentage, 2/3, of students from the high-SES backgrounds.
3. **The lower graduation rates of low-SES students cannot be fully explained by lack of academic preparation.** Academically strong students, defined as those who scored in the top quartile in math, from low-SES backgrounds were still much less likely to graduate from college than students of similar or even lower academic ability from high-SES backgrounds. In fact, only 41% of academically strong students from low-SES backgrounds graduated from college, in comparison to 74% of similarly scoring students from high-SES backgrounds. Graduation rates among less

academically strong students from high-SES backgrounds are 61% and 41% for students in the third and second quartile of math test scores respectively.

The NCES analysis is not unique: other researchers have found similarly high gaps in college graduation rates between students from low- and high-income backgrounds (Alexander, Entwisle & Olson, 2014; Cahalan & Perna, 2015)

### **Underlying Causes**

The NCES data shows that students from low-income backgrounds are less likely to be academically prepared than students from high-income backgrounds. However, as highlighted above, lack of academic preparation alone does not explain why student from low-income backgrounds are so much less likely to graduate with a college degree. Other causes include financial constraints, the types of colleges that students from low-SES backgrounds attend, and lack of necessary support or information along the way.

The financial burden is a significant factor in the disparity. Many studies have established that reducing the cost of college increases college attendance (Dynarski 2000, 2004; Kane 2003; Seftor & Turner, 2002). Research has also established a causal link between reduced cost and increased graduation rates (Dynarski, 2008). A survey funded by the Bill & Melinda Gates Foundation found that students cited the challenges of balancing school and work and their general inability to afford college as the top two major reasons they didn't finish. Further, the data highlight how the cost of school is particularly burdensome for students from low-SES backgrounds: almost 6 in 10 of the students in the study who left college before graduation had to pay for the cost themselves, instead of relying of their families for financial support (Johnson et al., 2009). The research on policies that decrease the financial burden has not been clear cut. There have been some successes, such as merit scholarship programs in Georgia and Arkansas that increased degree completion by 3-4% (Dynarski, 2008). Other results are less clear, such as the Student Achievement and Retention Project (STAR), a large randomized evaluation that found no effects on student retention among students who were offered \$5,000 to complete a full load of courses with a grade point average of 3.0 or higher, and only increased retention among women when students were offered the financial incentive coupled with academic support services (Angrist et al., 2009). A literature review of programs that reduce college costs for low-income students concluded that while the specific form and intervention matter, broad-based, simple programs requiring fewer burdens (e.g. paperwork) are the most effective (Deming and Dynarski , 2009).

A second factor is that students from low-income backgrounds attend colleges with lower graduation rates. A recent report from The Education Trust sheds light on this by analyzing the college graduation rates of Pell Grant recipients. Pell Grants are needs-based grants offered by the Federal government to low-income undergraduates. The report found that within a given university or college, the graduation rates between Pell and non-Pell students is only 5.7%, which is a much lower gap than the national gap between low- and high-SES students. In fact, if each institution were able to close the gap amongst their own graduates, the national gap would persist, because many Pell students go to colleges with lower graduation rates. The report concluded that in order to address the graduation gap, policies must focus on both reducing the gap in graduation rates within an institution but also on the absolute graduation rates at institutions in which poorer students enroll. (Nichols, 2015)

This points to an additional factor: lack of adequate guidance during high school. Hoxby and Avery found that the majority of academically strong students from poor backgrounds lack information about their options for college; many of them do not apply to even one highly selective college of university, even

though selective colleges typically provide much more financial aid than do two-year and less selective four year colleges (2013). On the positive side, Hoxby and Turner found that when low-income students do apply to more selective colleges, they are admitted and graduate at the same rates as high-income students with similar scores (2013a). In order to better understand why academically successful low-income students do not apply to more selective colleges, Hoxby and Turner conducted a randomized experiment called the Expanding College Opportunities (ECO) Project, in which they provided customized information about the college application process, estimated net cost, graduation rates, instructional resources, and application fee-waivers to selective colleges. The information was tailored for each student. The authors found that students who recalled seeing the ECO materials submitted 48% more college applications, were admitted to 31% more colleges, were admitted to a college with a 24% higher graduation rate, and attended a college with a 15% higher graduation rate, than their matched peers (2013a and 2013b). Based on these significant results, Hoxby and Turner proposed an expansion of this intervention, providing customized information to academically successful students from low-SES backgrounds, with an average cost of \$6 per student (2013c).

Lack of information is one piece of a broader challenge, which is lack of social capital. Social capital refers to the network of relationships that provide ongoing information, support, and important experiences. Access to such relationships and experiences helps students navigate not only entry into college, but also participation during college. Research has found that students from low-income backgrounds are less likely to participate in important social and academic experiences that support success, such as interactions with faculty, belonging to study groups, and participation in extra-curricular activities (Engle & Tinto, 2008). Even students from low-income backgrounds who participated in the International Baccalaureate Diploma Program (IBDP) in Chicago Public Schools and were thus academically strong and well-prepared for the intellectual challenges of college, had not learned the skills to access important college resources such as academic advising and initiating contact with their professors (Coca et al., 2012). This research suggests that students need experiences and skills that extend beyond merely academic and financial support.

### **Some Potential Solutions**

What interventions in high school and college seem to change the equation for low-income students? Hoxby and Turner's study indicates the influence of strong college guidance. A recent evaluation of the Knowledge is Power Program (KIPP), a charter school network that serves predominantly low-income students, found that KIPP high schools have a positive and statistically significant effect on measures that support students in college preparation: students were more likely to engage in discussions about college and paying for college at school, and students were also more likely to receive assistance at school with college planning. This increased support at school translated into positive and statistically different student actions. KIPP students were more likely to apply to at least one college; 93% of KIPP students had applied to at least one college or university by the spring of their senior year as opposed to 88% of comparison students. KIPP schools did not have a statistically significant impact on most measures of student motivation or educational aspirations. It is unclear how these factors affected KIPP students at college, as the report does not study the impact of KIPP programs on their students after high school graduation. (Booker et al., 2015)

Once students arrive on campus, what supports can colleges provide that lead to the success of students from low-income backgrounds? One promising answer is "coaching." Researchers from Stanford

University conducted a randomized experiment that tested the effectiveness of individualized coaching on student retention. Coaches contacted students regularly to help them overcome academic and social challenges faced at college, to develop clear goals, and to connect these goals to daily activities. Coaches supported the development of such skills as time management and consistent study habits. The researchers found that students who were randomly assigned to a coach were significantly more likely to attend the university two years after the end of the program, even among Pell Grant awardees and students taking remedial classes, and that the program increased graduation rates by 4%. Furthermore, the authors found that the coaching program produces larger effects and is less costly than programs that target financial aid (Bettinger and Baker, 2014). Researchers have also found promise in a more comprehensive program at the City University of New York (CUNY) called Accelerated Study in Associate Programs (ASAP), which is designed to help students graduate and do so quickly. Students from low-income backgrounds needing remedial courses from three community colleges were randomly assigned to participate in ASAP, which provides supports such as advising, career services, tutoring, seminars to increase student skills such as goal setting and study habits, tuition waivers to make up the difference between financial aid and tuition costs, free textbooks, and free access to public transportation. The program almost doubled graduation rates: by the end of the study, 40% of the treatment group had a degree compared to 22% in the control group, and 25% of students from the treatment group were enrolled in four-year colleges, as opposed to 17% from the treatment group (Scivener et al., 2015). Surprisingly, ASAP had a lower cost per degree than the control group, because the program produced so many more graduates (Scivener et al., 2015; Levin & Garcia, 2012). Both of these programs highlight successful interventions that can be implemented at the college level to effectively support students from low-SES backgrounds.

## Summary

Despite the increasing importance of a college education, there is a wide gap in graduation rates between students from low versus high-SES backgrounds. Research indicates that the cost of college, the quality of the institutions that poorer students attend, and the lack of information and support are important causes of the disparity. It is possible to mediate these factors by providing information to college-bound students about their options (including the importance of graduation rates upon college completion), and by supporting low-income students across multiple domains once they matriculate.

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